

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



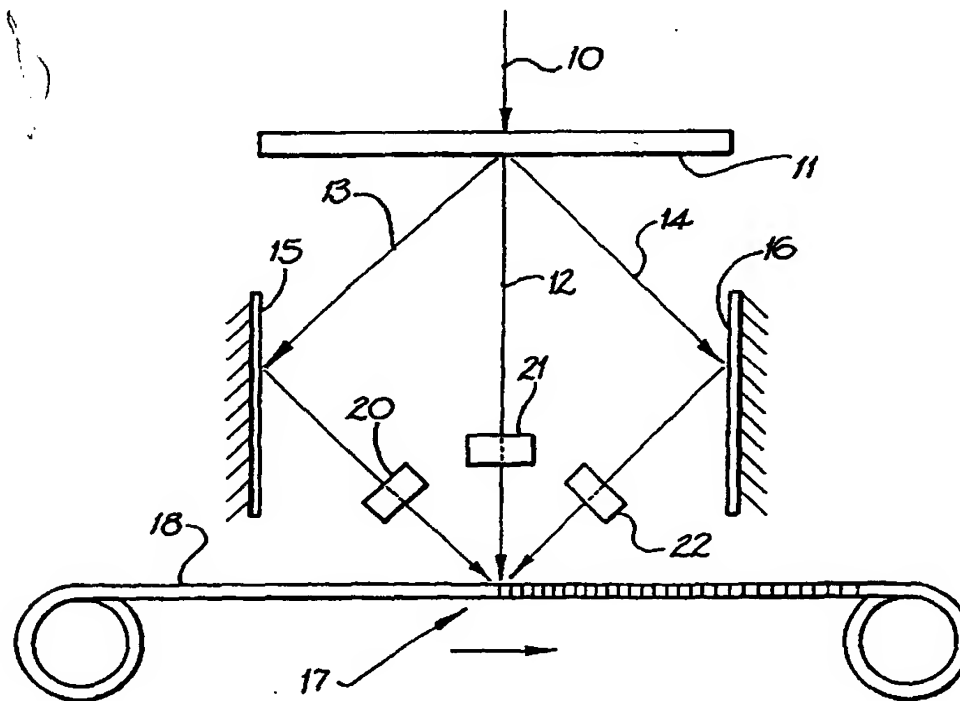
(43) International Publication Date
25 January 2001 (25.01.2001)

PCT

(10) International Publication Number
WO 01/06280 A1

- (51) International Patent Classification⁷: G02B 5/28, 6/13, 6/34
- (21) International Application Number: PCT/AU00/00839
- (22) International Filing Date: 11 July 2000 (11.07.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
PQ 1655 15 July 1999 (15.07.1999) AU
- (71) Applicant (for all designated States except US): THE UNIVERSITY OF SYDNEY [AU/AU]; Parramatta Road, Sydney, NSW 2006 (AU).
- (72) Inventor; and
(75) Inventor/Applicant (for US only): CANNING, John [AU/AU]; 10 Francis Street, Carlton, NSW 2218 (AU).
- (74) Agent: GRIFFITH HACK; G.P.O. Box 4164, Sydney, NSW 2001 (AU).
- (81) Designated States (national): AU, CA, JP, KR, US.
- (84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).
- Published:
— With international search report.
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF WRITING GRATING STRUCTURES



(57) Abstract: A grating structure is written in a photosensitive waveguide (17) by dividing a coherent beam (10) into at least three beams (12, 13, 14), and interfering them at the waveguide (17). The beams may comprise a zero order beam (12) and two first order beams (13, 14) diffracted by a phase mask (11), and their relative phases and amplitudes may be modulated to control and/or tune the grating period and shape. The method allows grating structures to be written in which a first order grating and a second order grating are superimposed.

WO 01/06280 A1